

ABSTRACT

A processor connected to an external bus in a conventional configuration made it possible to access its internal registers and local memory through the external bus and to read or update their contents. This created potential security threats including confidential data such as cryptographic keys being stolen and a newly developed piece of software being copied.

In a conventional media processor connected to an external bus all access requests from a device connected on the external bus are honored. Security threats are reduced by providing a TLB in the bus interface unit of the media processor whose contents can be updated only from inside the media processor. The TLB checks whether the address specified by an external access request falls within the access-permitted areas registered in it. If it does, the access request from outside is passed on to the inside of the media processor; otherwise, it is rejected.